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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/632,915	08/04/2003	Hiroshi Takeuchi	032879-018	4922

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EXAMINER	
SADULA, JENNIFER R	
ART UNIT	**PAPER NUMBER**
1756	

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/632,915	TAKEUCHI ET AL.	
	Examiner	Art Unit	
	Jennifer R. Sadula	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *12/12/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1DETAILED ACTION

Information Disclosure Statement

The IDS of 12/12/03 has been considered.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 6-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 6 states that the PVA has a hydrocarbon group of not greater than 9 carbon atoms however all of the claims that depend from this claim note that a piece of the PVA has 9 or less carbon atoms- thereby implying that the limitation of claim 6 does not further limit the parent claim as any hydrocarbon group of C_1-C_{1000} has a piece of it which has less than 9 carbon atoms. Furthermore, with regard to claim 8 it is unclear how HyD can have less than 9 carbon atoms (as is required by claim 7) wherein formula HyDII is satisfied. L^2-R^2 must have 3 or fewer carbon atoms however, it is confusing that R^2 may be a hydrocarbon group of not greater than 9 carbon atoms. Examiner notes that at the most minimum there would be 7-9 carbon atoms as L^2 can potentially not be carbon-containing and R^2 must have at least one. But it is unclear how R^2 could ever be more than 3 according to this interpretation and thus appropriate correction is required. Likewise, R^1 cannot be greater than 7 (not 9, as is claimed) as HyD already contains two carbon atoms and this claim depends from claim 7 which limits HyD from having any more than 9. Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-20 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/634, 906 (printed publication No. 2004/0109114). Although the conflicting claims are not identical, they are not patentably distinct from each other because both applications claim retarders comprising rub-aligned liquid crystalline layers adjacent to one another and maintained by a substrate wherein no alignment layer is disposed between the liquid crystalline layers. It would have been obvious to one of ordinary skill in the art at the time of invention to make the retarder with no alignment layer specifically between the optically anisotropic layers with a reasonable expectation of success with forming a thinner retarder (as is the trend in the industry) since both optically anisotropic layers are already pre-aligned.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Applicants claim a retarder or circular polarizer comprising a substrate maintaining two adjacent rubbed liquid crystalline layers. Examiner notes that while there is a limitation of no alignment layer disposed between the two optically anisotropic layers, nothing precludes there being an alignment layer in the device.

Claims 1-9, 13-20 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Arakawa et al., U.S. Patent No. 6,400,433 ("Arakawa").

Arakawa teaches a circularly polarizing plate comprising adjacent layers A and B as shown in figure 3 wherein one layer is liquid crystal molecules and the other is a polymer film or a layer made from liquid crystal molecules (abstract). The circularly polarizing plate further comprises a linearly polarizing membrane which is also made of a polymer film (typically PVA film) (1:54-60). With regard to claims 3-6, when the liquid crystalline layer is made of a polymer film, the polymers may be a PVA copolymer (11:60-65). As noted above, the PVA inherently has portions which have fewer than C_9. Additionally, the optically anisotropic liquid crystalline layer may further contain cellulose esters to aid in the rubbed or stretched alignment of the liquid crystals (21:65-

67). With regard to Applicants' claims 7-8, the formula is as shown in column 24 of Arakawa wherein while it is apparent Applicants' attempted to carve out of Arakawa by being fewer than C_9, because this fact is unclear in Applicants' claims it is apparent that this still is anticipated by Arakawa. Examiner further notes that Arakawa teaches that the PVA has a molecular weight in the range of 200 to 5,000 whereas Applicant's molecular weight is taught to be exactly the same range (see page 48 of Applicants' specification).

With regard to Applicants' claim 9, this cellulose ester is a non-liquid crystalline polymer having cross linkable groups With regard to claim 13 the non liquid crystalline polymer has a smaller value as noted. With regard to claim 14, the slow axis of the layers are not parallel, but rather perpendicular (6:35-37). With regard to claims 15-16, the slow axis difference can be 60° (6:55-58).

Claims 1-9, 14, 17 and 19-20 are rejected under 35 U.S.C. 102(e) as being fully anticipated by Ichihashi et al., U.S. Patent No. 6,519,016 ("Ichihashi").

Ichihashi teaches a phase retarder comprising two optically anisotropic layers adjacent to one another as shown in figure 1 wherein the layers are aligned perpendicular to one another (thereby satisfying Applicants' claim 14).

With regard to Applicants' claims 4-8, the formula for the PVA additive is as shown in column 13 of Ichihashi wherein while it is apparent Applicants' attempted to carve out of Arakawa by being fewer than C_9, because this fact is unclear in Applicants' claims it is apparent that this still is anticipated by Ichihashi. Examiner further notes that Ichihashi teaches that the PVA has a molecular weight in the range of 200 to 5,000

whereas Applicant's molecular weight is taught to be exactly the same range (see page 48 of Applicants' specification).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer R. Sadula whose telephone number is 571.272.1391. The examiner can normally be reached on Monday through Friday, 10am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F. Huff can be reached on 571.272.1385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JRS
15 April 2005

MARK F. HUFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700